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January 11, 2001

Mr. Steven M. Scharf, P.E., Project Manager
New York State Department of
Environmental Conservation
Bureau of Eastern Remedial Action
50 Wolf Road
Albany, New York 12233-7010

Re: Grumman Aerospace – Bethpage (NY Site 1-30-003A) &
Naval Weapons Industrial Reserve Plant –
Bethpage (NY Site 1-30-003B) Site
Proposed Remedial Action Plan
Operable Unit 2 – Groundwater Remedy

Dear Mr. Scharf:

We are submitting these comments based upon our review of the Proposed Remedial Action Plan (PRAP) and related documents furnished to us with respect to the above referenced sites on behalf of the South Farmingdale Water District (SFWD) and the New York Water Service Corporation (NYWS). SFWD and NYWS own, operate and maintain public water supply systems that serve approximately 225,000 residents. Both public water supply systems depend entirely on the underlying sole source aquifer for their water supply. Since a number of their well fields are down gradient of the above referenced sites and in the direct path of the existing off-site groundwater plume, both suppliers are extremely concerned over this potential threat to their public water supply systems.

The first significant concern is that the Remedial Investigation / Feasibility Study (RIFS) on which the PRAP is based has not adequately determined the horizontal and vertical extent of the off-site groundwater plume. Consequently, the PRAP does not specifically address the potential future impact of the groundwater plume emanating from the Grumman and Navy site on the SFWD and NYWS well fields. Rather, the PRAP attempts to generally address the potential impact to these well fields with a proposed well contingency plan.

Vertical Profile Boring (VPB) #76, drilled during October 2000 within the plume, indicates extensive off-site groundwater contamination near the intersection of Hicksville-Massapequa Road and Hempstead Turnpike. The data obtained through this vertical profile boring indicates the presence of trichloroethene at the following intervals (depth below grade): 153 –261 feet, 301-379 feet and 481–800 feet at concentrations as high as 200 parts per billion (ppb), well above the drinking water standard (5 ppb). This more recent data was not

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incorporated into the RIFS and the PRAP. However, it is likely that at some future date, the plume will most probably impact Well Sites 3 and 6 in SFWD and the Seamans Neck Road Site operated by NYWS. Which wells at these sites and when they will be impacted, as well as the present extent of contamination cannot be answered due to the lack of available information collected to date by the PRPs.

There are no adequate monitoring wells installed in the vicinity of, or south of, Hempstead Turnpike north of the SFWD and NYWS well sites and as indicated above, the one vertical profile boring that was conducted indicates significant contamination over a wide range of depths down to the Raritan Clay. Based on this limited information, we can not ascertain as to whether the plume will impact the SFWD and /or the NYWS sites in one year, ten years or twenty years from now. Furthermore, the model utilized by the PRP's consultants did not predict the presence and concentration of trichloroethene that was measured in VPB #76. There is much more work that needs to be done to adequately delineate the plume so that appropriate remedies can be developed, evaluated and a recommended plan put forth that will fully and permanently protect the sole drinking water source for many thousands of residents. Consequently, we are requesting that NYSDEC delay issuance of the ROD for OU2 since it would be premature at this time. Instead, we are requesting that the NYSDEC require that the PRPs embark on a groundwater investigation to properly delineate the plume and address that portion of the plume that has flowed beneath and south of Hempstead Turnpike.

During our meeting with Grumman, we inquired as to the source of the "hot spot" in Bethpage near Groundwater Monitoring Well GM-38 and were informed that this was most likely attributable to contamination caused by Grumman and the Navy that was not contained by the on-site wells utilized by the Navy and Grumman. In essence, it was contamination that "got away." What would happen if the ROD were finalized at this time and further groundwater investigations identify a similar "hot spot" nearer the NYWS and /or SFWD well fields? Would the suppliers and NYSDEC hold the PRPs accountable and obligate them to construct and operate the necessary and proper treatment facilities? What concentrations and location of the plume would be used as a trigger to require that they commence appropriate remediation and/or install appropriate treatment facilities?

The recommended alternative in the PRAP (#3) may lead some to conclude that NYSDEC is accepting a final remedy that results in utilizing public water supply well fields as the remedy to address groundwater contamination south of Hempstead Turnpike. To avoid this perception, we believe that it will be critical for the PRPs to delineate the extent of the plume asap so that appropriate alternatives can be considered for implementation, other than simply relying on treating public water supply wells that have been impacted by the plume.



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It is important for NYSDEC to recognize that the well fields utilized by both suppliers (SFWD and NYWS) have not been impacted by any organic contamination to date. Consequently, both suppliers have maintained a commitment to their customers of providing a water supply free from any detectable concentrations of VOCs.

The public water suppliers will need to address what alternative is most appropriate for each well field that may be impacted by the groundwater plume. At some sites, using air stripping as a treatment alternative is only palatable if iron removal facilities are also constructed. At other sites, activated carbon may be the answer and yet in other cases, abandonment may be the appropriate response should an alternate feasible water supply source be available. It is imperative that the selection be within the sole purview of the water supplier, and the total capital cost and annual operation and maintenance costs over not less than a thirty-year period be borne by the PRPs.

Since VPB #76 was drilled in October 2000, it is our understanding that the PRPs are waiting for the issuance of the ROD before any further work takes place. We strongly disagree with this approach. The lack of urgency in proceeding with additional vertical profile borings and the installation of the monitoring wells deeply concerns the SFWD and NYWS and suggests that the PRPs are not willing to consider whether additional public water supply wells may be at near term risk.

The PRAP needs to include a time frame for work elements that we believe should commence immediately. We have provided what we perceive to be a realistic schedule, which recognizes the urgency to proceed further with the groundwater investigation at this time.

The PRAP also needs to insure that the PRPs will be able to implement the selected remedy without a financial impact to the residents of the water suppliers. In order to provide this financial guarantee, why shouldn't NYSDEC require both PRPs, or at a minimum, Northrop Grumman, to provide a letter of credit that would be sufficient to cover all anticipated future costs?

The Wellhead Treatment Contingency Plan in the PRAP must adequately safeguard consumers served by the SFWD and NYWS. The plan outlined in paragraphs 8, 9 and 10 of the selected plan (pages 26 and 27 of the PRAP) are unacceptable as currently drafted. We have redrafted these elements of the proposed remedy below:

8. The remedy shall include the installation and quarterly monitoring for VOCs of outpost monitoring wells installed upgradient of potentially affected public and private well fields, including BWD well fields 4, 5 and 6. By July 30, 2001, outpost monitoring wells shall be installed upgradient of SFWD well field #3 and the Seamans Neck Road site in NYWS and



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quarterly monitoring commenced. The need for additional outpost monitoring wells shall be determined and where necessary, installed and monitoring commenced by December 31, 2001. The remedial design would evaluate and determine the best location for any additional outpost wells required for this program. The PRPs shall provide potentially affected water suppliers with the location and depth of outpost monitoring wells. Should the water suppliers determine that the proposal is unsatisfactory, NYSDEC will require that the PRPs install the additional wells unless NYSDEC believes that conclusive evidence exists indicating that the water suppliers' request is unnecessary.

9. The remedy shall include a Wellhead Treatment Contingency Plan for the design, construction, operation and maintenance of wellhead treatment systems, if necessary. The outpost monitoring wells installed upgradient of any well field that the NYWS, SFWD or other affected water supplier shall be monitored on a quarterly basis. If any site related contaminant is detected in an outpost monitoring well or a water supply well, a second sample shall be taken immediately. If the contaminant is confirmed in the second sample, then the water supplier shall determine the best alternative to be implemented and the time frame for implementation. The best alternative may range from treatment to abandonment and construction of a new well at an existing or new well field. The PRPs shall be obligated to pay for all costs incurred by the water supplier in evaluating, designing and constructing the appropriate remedy. In addition, the PRPs shall pay the water supplier for the additional operation and maintenance costs for a period of not less than thirty years.

10. Delete in its entirety

In summary, we believe that it is imperative that the PRPs achieve the goals of the RIFS before a ROD is issued. To date, the vertical and horizontal extent of the plume has not yet been determined and consequently a proper remedy cannot be selected, which will fully protect any wells of SFWD and NYWS which may be impacted by hazardous substances emanating from the sites. The potential impacts of the plume on public water suppliers down gradient of the plume must be assessed once this additional information is collected, reviewed and evaluated.

You indicated at our meeting of January 9, 2001 that it is your opinion that NYSDEC can address the concerns of both suppliers by issuing a ROD at this time. If NYSDEC is still of this opinion after considering our comments as outlined in this letter, then we request that NYSDEC provide both suppliers an opportunity to review a draft of the proposed ROD, prior to its issuance.

In closing, we thank you for the opportunity to submit these comments and are willing to meet with you to discuss the PRAP in greater detail. Should you require any additional



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information or have any questions, please contact me at 631-756-8000, extension 1140 at your convenience.

Very truly yours,

HOLZMACHER, McLENDON & MURRELL, P.C.

A handwritten signature in black ink, appearing to read 'Gary E. Loesch', written over a horizontal line.

Gary E. Loesch, P.E.

cc: Board of Commissioners, SFWD
Vincent A. Bohn, Jr., Vice President – Utilities, NYWS
Willis B. Carman, Jr., Esq.
Ray Cowen, P.E., Regional Director-NYSDEC

**Grumman Aerospace – Bethpage (NY Site 1-30-003A) & Naval Weapons
Industrial Reserve Plant – Bethpage (NY Site 1-30-003B) Site
Proposed Remedial Action Plan -- Operable Unit 2 – Groundwater Remedy**

**Schedule for Additional Groundwater Investigation &
Installation of Outpost Monitoring Wells**

Work Item	Schedule
1. Commence more frequent monitoring of potentially impacted wells within SFWD & NYWS at the PRP's expense	ASAP
2. Refine and re-run groundwater model based on data obtained from the vertical profile borings which reflect off-site groundwater contamination from the subject sites	By May 1, 2001
3. Install outpost monitoring wells upgradient of SFWD – Plant 3 and NYWS – Seamans Neck Road Plant site	By July 1, 2001
4. Commence quarterly monitoring of outpost monitoring wells	By July 1, 2001
5. Continue with groundwater investigation to determine the vertical and horizontal extent of the plume via modeling, additional vertical profile borings and installation of groundwater monitoring wells	By Sept. 1, 2001
6. Based on the findings in Item 5, install additional outpost monitoring wells, as needed to provide SFWD and NYWS an early warning system for any other potentially impacted well field	By Dec. 31, 2001
7. Commence quarterly monitoring of outpost monitoring wells installed under Item 6.	By Dec. 31, 2001